Orbital
Innovation You Can Count On®

FACT SHEET

1982-2010
28 Years in Space

Minotaur I

Space Launch Vehicle

Minotaur I has a demonstrated success record and flight-proven systems, as pictured above, from left: MightySAT II.1 - July 2000 and TacSat-2 - December 2006.

Overview

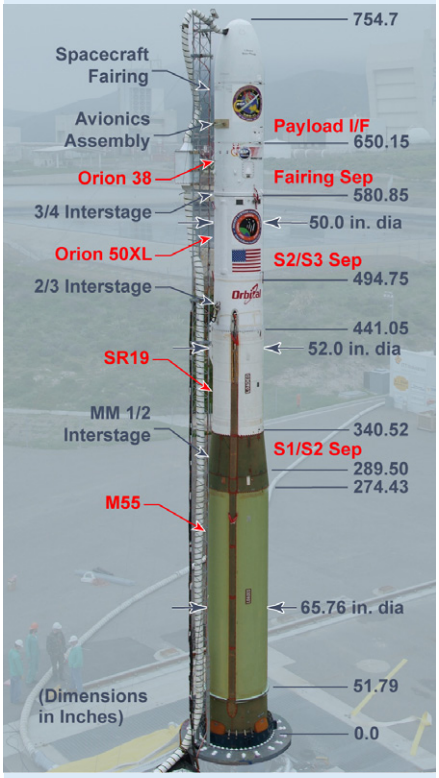
The Minotaur I Space Launch Vehicle (SLV) provides a responsive, reliable, and cost-effective launch solution for U.S. Government-sponsored spacecraft. It builds on a long background of dependable launch systems and has a demonstrated successful history over its initial and subsequent launches. The Minotaur I SLV uses residual Minuteman II first and second stage rocket motors along with the upper two stages shared with Orbital's Pegasus XL and Taurus XL commercial SLVs. The combination of decommissioned ICBM motors with commercial boosters and state-of-the-art hardware is one of Orbital's unique strengths from experience spanning several decades.

The Minotaur family of launch vehicles are provided via the Orbital/Suborbital Program 2 (OSP-2) and managed by the U.S. Air Force Space and Missile Systems Center (SMC), Space Development and Test Wing's (SDTW) Launch Test Squadron (LTS) located at Kirtland AFB, NM.

QUICK FACTS:

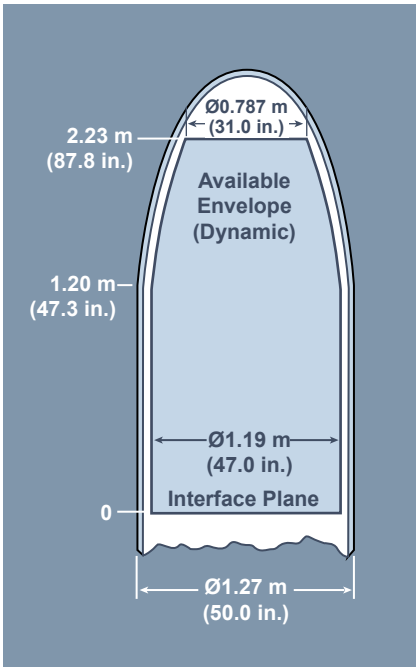
System Features

- Full spacecraft integration support, including mission management, spacecraft interface support (power, telemetry, sequencing, attitude control, and deployment), through launch operations and post-launch performance evaluation
- Standard 18 month mission response including mission integration and launch by Orbital's uniquely experienced team
- Responsive launch solutions from 6 months to a few hours available
- Mission success is ensured by mature systems and processes
  - Orbital's rigorous mission assurance program
  - Full Government insight and independent assessment
- Multiple spaceport launch capability (California, Florida, Alaska, Mid-Atlantic) using portable ground support equipment

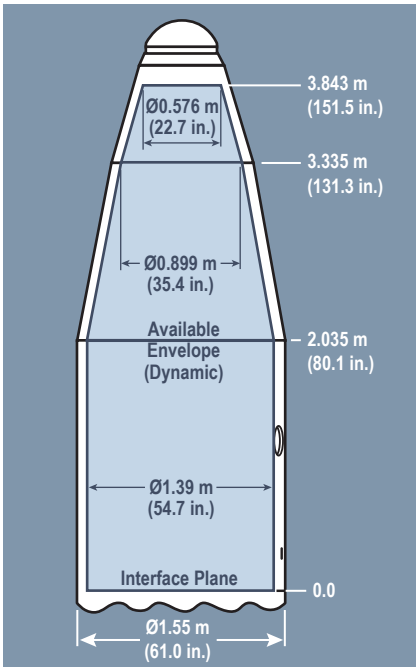


Minotaur I space launch vehicle – ready to launch

Minotaur I



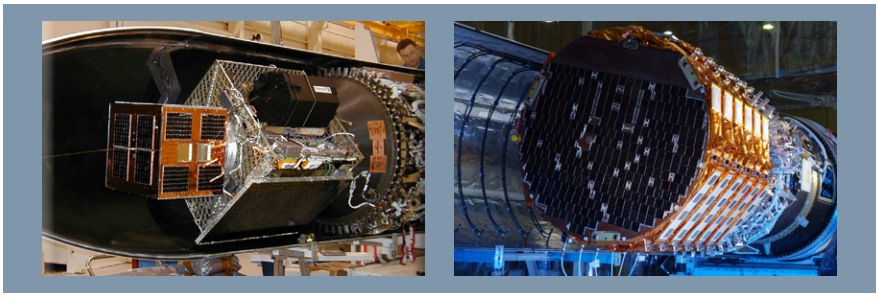
Standard 1.27 m (50 in.) Fairing Envelope



Optional 1.55 m (61 in.) Fairing Envelope

Payload Accommodations:

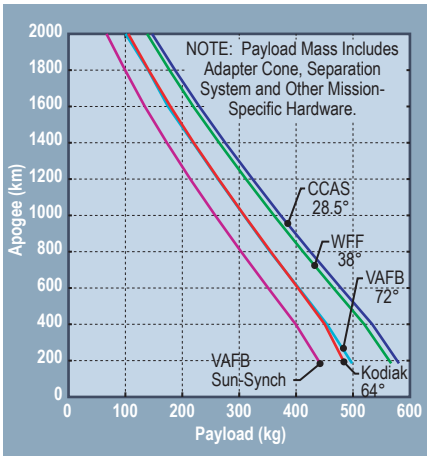
- Standard 1.27 m (50 in.) dia. spacecraft fairing (Pegasus heritage design)
- Optional 1.55 m (61 in.) dia. spacecraft fairing for larger and/or multiple spacecraft missions
- Mission-specific fairing access doors for spacecraft support
- Well-defined launch environments validated with flight data
- Various flight-proven spacecraft separation systems available, including low-shock designs
- Thermally controlled fairing volume with standard Class M6.5 (100k) cleanliness
  - Optional Class M5.5 (10k) cleanliness
  - Optional spacecraft nitrogen purge



Simplified horizontal payload integration for single and multiple spacecraft

Performance

- Spacecraft mass-to-orbit of up to 580 kg to LEO (28.5 deg, 185 km)
- Typical orbit accuracy of better than ±5 km insertion apse, ±35 km non insertion apse, and ±0.1 deg inclination
- Optional enhanced insertion accuracy better than 5 km in altitude and ±0.05 deg inclination
- Cold gas attitude control system readily accommodates a variety of spacecraft mission requirements, including precise separation pointing and post-boost maneuvers



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Additional information should be obtained from the USAF OSP Office

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